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1899.

AGRICULTURAL AND PHYSIOLOGICAL
INVESTIGATIONS

Smith's . . .

Seventeenth Annual
Catalogue

OF THE ❁ ❁ ❁

**HIGHLAND FRUIT and
PLANT FARM.**

**Small
Fruits
and Pears
a Specialty.**



B. F. Smith, 2

P. O.
DRAWER 6.

Lawrence, Kansas.

(SEE LAST PAGE OF COVER.)

The J. D. Miller Mercantile Co.,

Our facilities for handling Fruits and Vegetables are first class; our acquaintance extensive, and our reputation for fair dealing second to none. If 25 years experience in business in this city is of any benefit to us, it is also a benefit to our customers and all who deal with us. Our motto: "Quick sales, prompt returns."

120-122-124 First Street,

WHOLESALE ❀ ❀

**Fruit and Produce Dealers
and Commission Merchants**

ESTABLISHED 1872.

References:

First National Bank, Pueblo.
R. G. Dunn & Co., Com'l Agency.
Wells, Fargo & Co.

PUEBLO, COLO.

Palmer & Co., ❀ Wholesale ❀ ❀ ❀ ❀ **Fruit Dealers,**
SIOUX CITY, IOWA.

ESTABLISHED 1878.

We make a specialty of berries in car lots.
Our market is the best for its size in the United States. Correspondence solicited.

B. F. Bowen & Co.,
General Commission Merchants.

1517-19 Market St., DENVER, COLO.

IRA J. MORSE,
The oldest established Commission House in the City. ❀ ❀ ❀ ❀ **Commission Merchant.**

No. 17 E. Huerfano St.

COLORADO SPRINGS, COLO.

References: Banks, Express Companies and Business Men of the City.

• Preliminary Parley. •

AT the beginning of the New Year we usually have a few introductory observations to make about the outlook of the year. First, we have much to be thankful for in the generous patronage accorded us in the past years. Cordially thanking you one and all for past favors, we are fully prepared to supply your wants in the way of plants in the future, as in former years. For seventeen years we have silently called on you through the medium of our catalogue to know your wants and tell you what we had to sell.

It would be a greater pleasure to meet you in person and grasp your hand and see your faces; but it is impossible; you are too widely scattered for one to ever see but few of you. So the next best thing the writer can do is to ask you to look over our instructions about ordering plants and the low prices in comparison with those of traveling salesmen. It is our desire that you keep in mind the fact that our Catalogues, published from time to time, are our ONLY agents. They go anywhere in the United States or Canada for one cent. Our agents agree to sell you plants as low per 1000 as most agents do per 50 or 100 plants. Then our agents do not trouble you when you are busy, but you have long evenings and cold days to look over and compare prices and see what suits you. Again, our agent does not use any flattery or tricks to induce you to buy his stock, but he tells you the facts about all of his goods, and then leaves you to decide as to your wants, etc.

We are all the while testing new fruits, in fact we are carrying on an experimental berry farm in connection with our commercial berry patches. While our tests may not be in accordance with scientific methods, as practiced by the government appointed stations, still, our tests give us a great deal of satisfaction, for it is really a source of pleasure to have a few new varieties to nurse, as we never know but some little new nurseling may turn out to be a valuable fruit and the very ideal strawberry, raspberry or blackberry that we are all seeking for.

Our prices are about the same as last year. We still carry a good stock of the older varieties, as many of our patrons will have no other sorts.

In closing our preliminary, we again thank you for all the kind words and testimonials in our behalf. We wish to say further, that if you do not need plants this year, keep our Catalogue for future reference, or hand it to some friend who may want plants or pear trees; for bear in mind, we are adding a department on pear tree planting.

We are always ready to answer correspondents on any point about any kind of fruit culture when a stamp is enclosed for return postage.

Box 6, Lawrence, Kan.

B. F. SMITH.



GENERAL INSTRUCTIONS

ABOUT ORDERING PLANTS
AND SENDING MONEY. ❧❧

THIS IS OUR REVISED SEVENTEENTH ANNUAL CATALOGUE FOR 1899

Our Location is in the most fertile fruit-growing region in the State of Kansas. There are more berries, more plants, more apples and pears shipped from Lawrence than from any other three towns in the State. Our own shipments of fruits and plants in 1897 were over 4,000 packages.

Our Stock is of our own growing—pure, strong, healthy plants. They are tied 25 in a bunch, and packed in light boxes. We sell only young, well rooted plants, from which all dead leaves have been removed. They are packed in shallow boxes, the roots are in moss and the leaves exposed to the air.

Terms of Sale—No order will be booked this year unless it is accompanied with all cash, or at least half the payment. We have too many thirty and sixty day promises standing over in the past two years, not paid.

Remittance may be made in cash by Express, by registered letter, or by postoffice order or draft on Kansas City.

Duration of Plant Season—Shipping in Spring begins about the 15th of March and continues until about the middle of May; and in the Fall from October 1st until freezing sets in.

Prices of Plants—Five hundred of one kind will be furnished at one thousand rates, but the prices in the table must be the guide for mixed orders of several kinds.

Shipping Facilities—No nursery in the country has better means of transportation.

Former Lists—This is my latest price list. Its publication cancels all previous quotations. For prices of plants of all kinds, see tables inside catalogue.

Packing House—The cars on Massachusetts street run direct to our sales yard and packing house, where we keep a stock of all kinds of fruits trees, shrubs and small fruit plants.

Orders Must Amount to One Dollar. as the necessary correspondence and postage on orders for a less amount are sent at a loss.

Mistakes—Yes, we make mistakes, so do other nurserymen, but we use our utmost endeavors to avoid errors.

Observations



and Comparative Notes about Varieties in 1898.

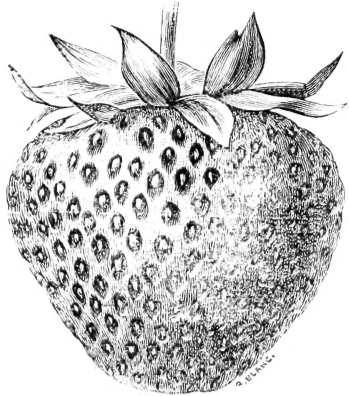
AROMA.—This is one of the most attractive strawberries in our collection. It is large, firm, and a light scarlet in color. While it is lacking in productiveness, as compared with Earl, Crescent and Warfield, it will become a favorite when better known. Perfect Blossoms.

BISEL.—This sort has fruited three seasons on my soil. Berries are large, firm and productive. Prof. Green, of the Ohio experiment station, says: "This variety is worthy of commendation because of its prolificacy." Berries are uniform in size and as large as the Bubach. It is imperfect.

Capt. Jack, Downing or Robinson are good pollenizers. (See cut on next page.)

BARTON.—This is a very productive, handsome strawberry, that needs to be well pollenized or its fruit will be knotty and imperfect. The plant is one of the most hardy. Miner, Robinson or Brandywine are good pollenizers for Barton.

BEDERWOOD.—It is about as early as the Michel and four times more prolific. Berries are tender, and will not bear shipping long distances.



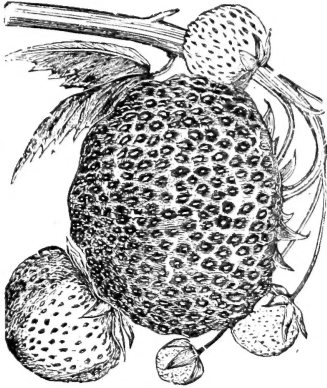
AROMA.

BISMARCK.—Originated in Arkansas. It is a seedling of the Bubach, berries almost as large, with the advantage of a perfect blossom.



Bisel. (See description on page 3.)

BUBACH.—An old favorite that is well known. I picked six quarts of it in 13 minutes that run about 23 berries to the quart. It taxed my ability somewhat, but it was my desire to have a good record as a berry picker; so my



Bederwood.

rating would be about 300 boxes per day. Owing to drouth our stock plants of this variety are small.

BRANDYWINE.—This sort was a disappointment. It may be that too much was expected of it. There is no question but that it has done well in some localities. Try it, your soil may suit it.

CAPT. JACK.—The Jack is my best Albuquerque 900 mile shipper, as well as pollenizer.

CHAS. DOWNING.—This old variety, like Capt. Jack, is too well known to repeat the story, but remember it is a good pollenizer for all pistillates.

CRESCENT.—This old and well known sort was introduced about 22 years ago; it is as productive now as it was then.

CYCLONE.—This berry is not quite up-to-date in all of the needs of the time.

CLYDE.—Plants are vigorous and healthy. It stands high among all who have fruited it.

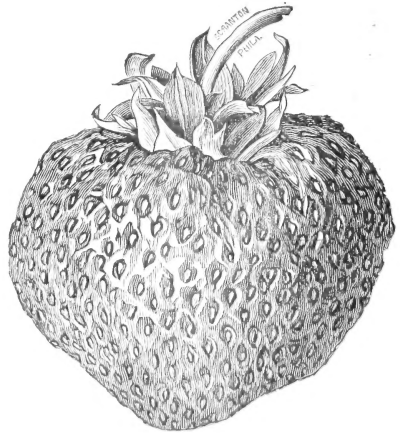
EDGAR QUEEN.—Well known but somewhat out of date. Though some seasons its fruit is very large.

EDITH.—Have not fruited this variety; it will fruit this season. It is said to be large and productive.

ENORMOUS.—Large and productive. Mid-season, too late.

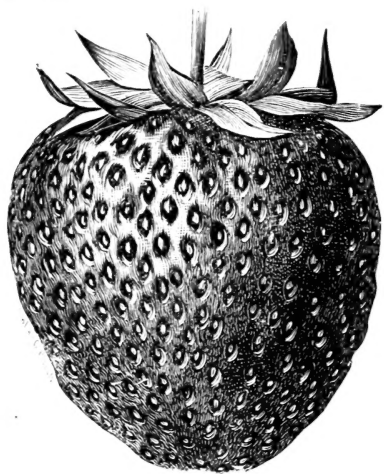
GERTRUDE.—Have not fruited this sort. It is said to be early and productive. Blossoms perfect.

GANDY.—Well known to be large and late. It has a big reputation in Southwest Missouri.



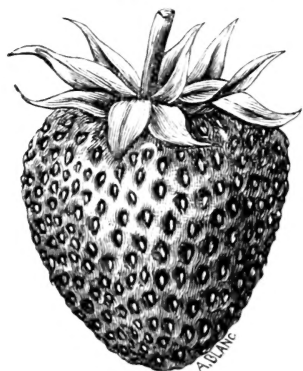
Bubach.

GLENDAL.—I have had this old variety in my collection 16 years. While it is out of date as a berry for commerce, yet for canning it is without a rival.



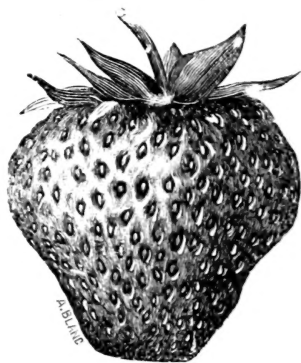
Brandywine.

MARY.—It is said to be the largest strawberry ever produced. It will fruit on our trial ground this year. The plant is small and does not appear as hardy as the Bismarck or the



Capt. Jack.

MARSHALL.
—One among the large show berries. In some localities it is quite productive. Owing to the size, it, as well as all large berries, always bring a fancy price.



Crescent.

MEALE.—Originated with A. H. Griesa, of Lawrence. Berries medium in size, very productive.

MUSKINGUM.—If this variety had a strong plant to take care of its fruit it would do to tie to for all purposes. Its flavor and size are way up.

HAVERLAND.—Is one of the leaders for Chicago market at Centralia, Illinois. Its berries are not very firm. Plant is hardy and does not set many runners.

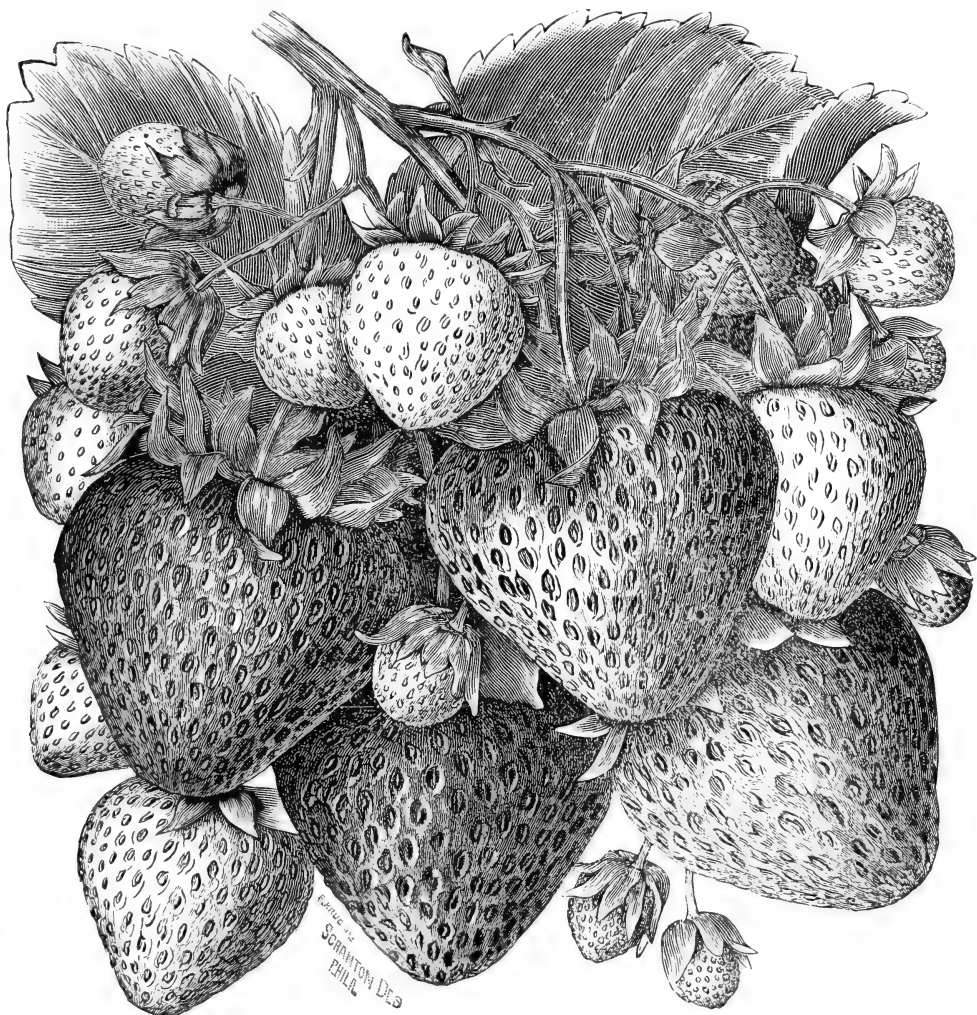
IOWA.—Sometimes called Beauty, is really a beautiful strawberry.

ISABEL.—Or No Name. A moderately productive plant, hardy, berries too dark in color and sour.

JESSIE.—This variety has about run its race. Fruit fine to taste, but very soft.

LOVETT.—This sort is a good staminate, and some seasons very productive. Last year it was up toward the top.

MINER.—This is one of our old favorites. It is a good pollenizer, and when seasons are favorable, it is mighty hard to beat.

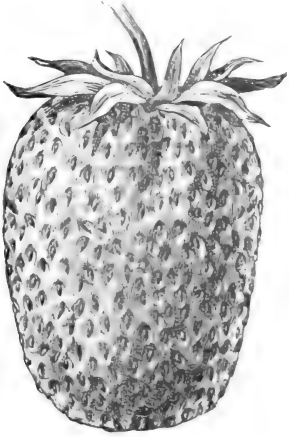


Gandy.

MICHEL.—An early variety that is out of date.

PARIS KING.—This variety has passed the ordeal of the experiment-

al garden. It will become a standard: in fact, I rate it among my best commercial berries. The plant is a strong, hardy grower, having a good staminate blossom, making it one of the best pollenizers. We feel assured that no one will make a great mistake by planting a few Paris Kings. Berries are larger than Capt. Jack or Crescent, and are a bright scarlet.

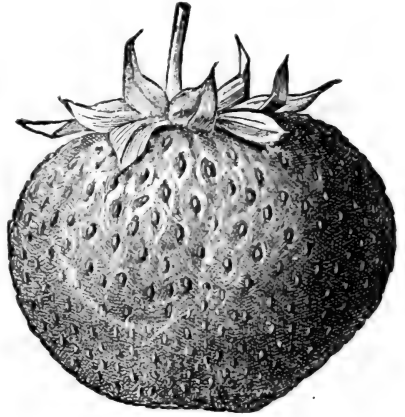


Haverland.

It is held in many localities, while in others it is very unsatisfactory. One of its weak points is its turning to a dingy light red soon after being picked, when exposed to

PARKER

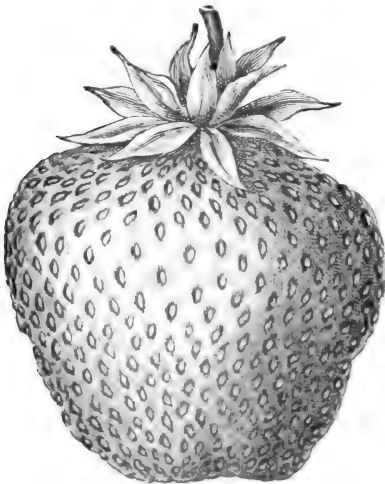
EARL.—It's no use parleying about its great productiveness, for it is so. It has a firm



Mary.

the air on the market stand.

RIDGEWAY.—The originator, Mr. Ridgeway, says: "The past season this variety produced more quarts per acre than the Parker Earl, which heretofore had never been surpassed." All reports so far received of the Ridgeway are highly favorable to this new strawberry. We had a fine show for berries of this variety up to the time of the hail storm; but after that great disaster there was not enough left to make any report as to what it might have done.



Miner.

ROBINSON.—The latest strawberry in my collection. It lengthens season so that we now have, with the earliest

and latest, about five weeks strawberry season. Robinson is large when plants

are not permitted to set nearer each other than three or four inches apart. It is one of the best staminate for late blooming varieties.

RIO.—When all the conditions are favorable, this variety is fairly productive. There are at least a dozen better kinds.



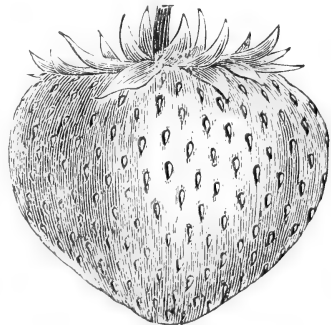
Nick Ohmer.

NICK OHMER.—Was named after Mr. N. Ohmer, ex-president of the Ohio State Horticultural Society. Some good and some bad reports on this sort. Hail destroyed our interest in it last year.

GLEN MARY—Plants are inclined to grow in hills. Prof. Green says: "Berries are large, often flattened and ribbed, but seldom coxcombed." Dark scarlet, glossy, beautiful. It excells Marshall and Sharpless in productiveness.

GIANT.—Plant and foliage appear perfectly healthy. Mr. McNallie, of Southwest Missouri, says this berry was a surprise to him after seeing it fruit. He considers it one of the good things to have.

SPLENDID.—This is a strawberry that is making a good record all over the country. I could give several pages of testimonials to its good standing among a large class of commercial berry growers. Berries are not the largest, but they are large and uniform in size, and look well in crates and on the market stand. We planted more of it last year than any other one variety. Mr. George Kellogg, of Wisconsin (good authority on berries), says: "In yield, firmness, flavor, size, color and vigor, the Splendid stands second to no staminate variety." We bought our plants direct from the originator four years ago, hence we have fruited it three years.



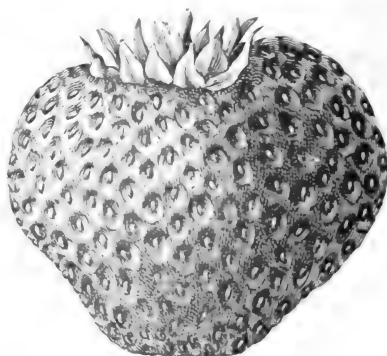
Giant.

SAUNDERS.—This is a late, hardy variety, introduced to the berry growers of this country by the late John Little, of Ontario. Plant is healthy and hardy. The berries are firm and above the average in size, and as late as the Gandy.

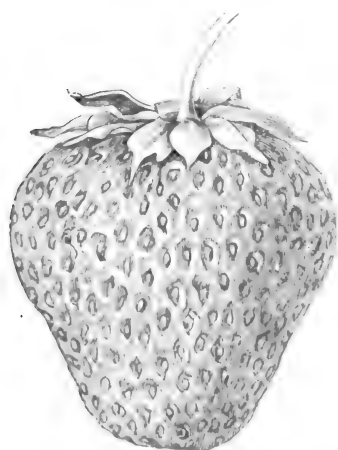
WARFIELD.—This variety is conceded to be one of the best varieties ever introduced. It needs no commendation further than it already had. It should be grown in thinly matted rows—plants not nearer than three inches.

WOLVERTON.—In this strawberry we have one of Canadian origin, of remarkable size, but lacking somewhat in prolificness.

WINDSOR CHIEF.—This is one of my old favorites. We introduced this grand old variety to the berry growers of Kansas and Missouri, and have never heard of, or had a kick about its size or lack of prolificness. When plants have had half a chance and plenty of moisture they turn out abundantly.



Splendid.



Warfield.

RUBY.—This variety grew in a bed beside the Ridgeway and we cannot report fully but can say its berries in the green stages were large, but the vines were not as full as the Ridgeway. The plant appears to be hardy.

MM. BELT.—I paid one dollar each for plants of this over-estimated variety. Fifty cents each was the highest price I ever paid before. It was the Bubach in the fall of 1885. Have fruited Belt two seasons, and must say that I was more disappointed with it than any strawberry I ever bought.

Strawberry Lands

MAY be found all over our country, on the hillsides, on the mountain and in the valleys. A recent writer from the gold fields of Alaska saw wild strawberry vines and raspberry bushes along the Yukon river. So we need not be surprised if some enterprising small fruit man should be advertising Yukon berry plants as being the ideal for hardiness, if not for productiveness. Although strawberries grow on almost every kind of soil, there are soils that are better suited to their wants, and where they will reward the producer with better returns. When early berries are desired, select a southern slope, but for later berries a northern slope is preferable. If you have neither, plant a patch

"Berry plants received in fine condition."—A. C. Robinson, Wichita, Kan.

somewhere about the farm where you can raise enough for your family, some for the birds and for the sweet honey bees. They will pollinize the blossoms, and if the berries are left until they are very ripe they will take the honey out of them. Really the best soil for berries is timbered lands bordering on streams, or the slopes near the foot of hills. Land where sweet potatoes, melon vines or cabbages grew the year previous to planting is good for all kinds of small fruits.



The Strawberry Field

May be of any size that will afford the greatest convenience. It may be one, two, five or ten acres. There should be wagon ways around and across it, to be used for hauling manure, or mulching for winter protection.

PREPARING THE SOIL. We do not approve of spring plowing in Kansas, as we sometimes have drouthy spring seasons. Hence, in these later years we have plowed our berry-patch lands late in November, and when ground was not frozen, in December or January. It should not be harrowed until spring, and then it should be done a few days before planting. Again just before beginning to plant we have the smoothing board or levels go over it.

CULTIVATION.

About ten days after planting, a small iron tooth rake will do effective work in loosening the soil around the plants. To follow it, a small steel tooth horse cultivator should be worked between the rows every ten days during the summer.

When weeds begin to grow the hoe must be used tenderly around and near the plants. When the runners start they must be trained, when it is desired to grow matted rows, to fill the space between the plants. At no time during the summer allow the berry beds to lay long after hard beating rains before you stir the soil between the rows. Keep down all weeds from their appearance after planting to the close of the weed growing season. Much more might be said about cultivation; in fact, a dozen pages might be used in all the minor details of cultivating the berry field the first and second seasons after planting.

Points. . .

Earliest—Michel, Bederwood, Crescent, Downing.

Medium Early—Warfield, Capt. Jack, Parker Earl, Splendid, Barton, Haverland, Bisel, Bubach, Jessie, Miner, Paris King.

Latest—Aroma, Gandy, Windsor Chief, Saunders, Glendale, Brandywine. Robinson being the last of all the older kinds.

Best Pollenizers—Capt. Jack, Robinson, Miner, Chas. Downing, Parker Earl, Paris King, Splendid. Capt. Jack and Robinson are probably the best, but all are good pollenizers.

Spring Planting. . .

Spring is always the best time to plant for commercial purposes. By planting at this season, plants have a long season in which to grow, and when planted, as soon as the soil is warm enough they start quickly and soon make runners, filling the spaces between the plants and thus a well matted row is formed before the usual dry season of July and August occurs, which is so often destructive to the growth, if not the life, of the plant.

"DEAR SIR:—Plants received in good order. Respectfully,

R. B. BAY, Central City, Kansas."

Summer and Fall Planting. . .

Planting at this season may be a success in a small way, when there is a certainty of moisture by irrigation or in a climate where rains are frequent and long dry seasons are unknown. By planting in August, or early in September a growth of plants may be had sufficient for family use, or to determine the value of a new variety for commerce. But when it is the intention of the planter to grow for market purposes, we invariably recommend spring planting.

Distance Between Rows. . .

The older berry growers of 25 or 30 years ago marked off the rows from two to two and a half feet apart, and they set the plants from ten to twelve inches apart in rows. By this method of planting their berry patches, by the close of the summer season the plants had covered the entire surface. Then the cultivation was, of necessity, done by hoeing and hand weeding. But there were no very large patches of strawberries in those days and no glut or oversupply in the market. But now with the largely increased acreage of the berry business, it becomes necessary to use cultivators and horse power. When this change was made, we began to widen the rows, first to three and a half feet and then to four feet, the same distance that corn is planted. But in our Kansas climate, if one knew we were going to have a dry season, three feet apart would be ample room for all varieties except the Crescent.

In my own planting, and for the purpose of keeping all varieties entirely separate, the rows are marked four feet apart. I can therefore assure my patrons of the certainty and purity of my plants. When the planter desires to cultivate by hills, the plants should be set three feet apart each way.

Matted Rows vs. Hills. . .

Latterly much has been written about the hill culture of strawberries and many tests have been made by the experiment stations and large commercial growers of the country; but it is now the sense of the majority of berry growers of the country, that the wide continued matted row is the best method of berry culture, with possibly one single exception. The Parker Earl may be an exception, as its natural tendency is to grow in hills. In the hill culture system there is more danger of plants being heaved out of the ground by continued freezing at night and thawing out during sunshiny days of the winter and spring seasons. But in the matted row system of culture roots become interlocked, crossed and

compactly set, that there is scarcely any liability of their being seriously injured by alternate freezing and thawing. In every instance I have always had the best success with matted rows and I unhesitatingly recommend the wide matted row to all my patrons.



What 10,000 of My Plants Did. • •

It does not fall to the lot of many growers to get as large a yield of berries as our patron, J. O. Buchanan, of Shawnee county, raised from 10,000 plants bought of me in 1896. Here is what he says about it: "When a commercial berry grower leaves the Crescent, Capt. Jack, Bederwood and one or two others out of the list he is wasting his time. In the Spring of 1896 I ordered from you 6,000 Crescent, 3,000 Capt. Jack, and 1,000 Glendale. The next Spring, 1897, I picked 30,000 quarts from the 10,000 plants and their increase. Then I had a large crop last Spring. This is a larger yield than I ever produced from an equal number of plants."

Our patron's berry-patch is along the foot-hills of the Wakarusa, Shawnee county, where he has as good strawberry soil as any in the state. His instruction in the selection of soil was doubtless found in some one or more of our catalogues. We have received many testimonials from patrons who have made a success of berry culture, whose only guide was found in our catalogue.

The above letter, received a few days ago, was the first intimation that I had received from him in regard to his yield. So, thinking a mistake might have occurred in his calculation, I wrote him to refer to his books and see if he had not made an error. He replied as follows:

"DEAR SIR:—In reply to yours of the 25th would say, that I made no mistake in regard to the amount of berries I picked off of the 10,000 plants I got of you. I set them $3\frac{1}{2}$ feet each way, they made a matted row about $2\frac{1}{2}$ feet wide and then there was not one foot of ground that was not set in plants from one end of the row to the other end they all grew. I set them out very carefully. I picked over 1,300 crates and the last day I picked 35 crates by 11 o'clock. I had ordered crates from Topeka and Kansas City, they wrote me that they could not obtain crate material in either city, so I had to quit picking and did not get any crates for a week after. By the time I got crates of course the picking season was over, but I have no hesitation in stating that there were at least 400 crates left unpicked, making a crop, if they had all been picked, of 40,000 quarts. That was the estimation of a number of the best fruit growers in the community, and I am sure it was no less. I have good soil and a splendid location for berries, as good as I have ever seen.

Wakarusa, Kansas.

Respectfully, JOHN O. BUCHANAN.



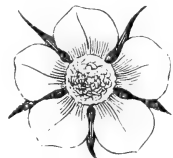
THE honey bee is a helper in the distribution of pollen. Some years ago the winter was so severe that nearly all the bees around Lawrence were frozen. The following summer berries were poor, misshapen and imperfectly pollinized. I have the kindest regards for the busy bee, and always walk with care among the strawberry blossoms, fearing that my foot will kill the little workers.

In former catalogues I have used the terms, staminate and pistillate, to designate the difference between those that carry their own pollen in the flower and



BI-SEXUAL,
or Perfect Flower

those that contain no pollen. But in this catalogue the word *perfect* follows the names of all the staminate strawberries and the word *imperfect* after all the pistillate varieties. It is thought that the imperfect varieties are the most productive, but not so firm, yet less liable to be killed by the frost. In my planting



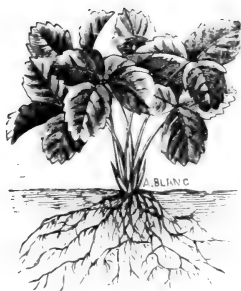
PISTILLATE,
or Imperfect Flower.

for market, I use an equal number of perfect and imperfect varieties; that is, four rows of perfect and four rows of imperfect sorts.

The best pollenizers are Capt. Jack, Robinson, Bederwood, Downing, Miner, Jessie, Gandy, Splendid and Parker Earl.

There is a difference in the amount of pollen produced, and it is a matter of study to rightly adjust the perfect flowering sorts to the imperfect varieties to get the best results.

• Planting the Strawberry Patch. •



Right way of planting.

For horse culture, plant in rows $3\frac{1}{2}$ to 4 feet apart, and in the rows plants may be set from 12 to 15 inches apart. When plants are high in price the distance between may be lengthened to 18 or 20 inches. With good cultivation and a moderate season for plant growth, the spaces will be filled up, making it a well matted row of plants.



Wrong way of planting.



Do not set Plants on a dry, windy day. For setting plants, hardly any two men adopt the same methods or use the same kind of tools. While some planters use a spade, and a boy to carry the plants, others mark off the rows with a horse and narrow shovel plow, opening a furrow three or four inches deep; boys follow dropping the plants while men follow them packing the soil firmly around the plants. We use a line. To each line, two men with bright garden trowels and a small box or basket of plants, trimmed and roots moistened in water.



Remember, plants received from abroad **must** be unpacked on arrival, the bunches loosened and heeled in the ground.



What Shall We Plant?—This is a question that is a puzzle to many new beginners. They read over the catalogues carefully, and in most of them they find all kinds so highly recommended that they do not know what to plant. We have tried in all our catalogues to tell the facts about the different kinds, and how they have served our purpose. Whether productive or not, on our soils, we give the facts as they occur. A new beginner should have his first experience with some of the lower-priced varieties, unless he has plenty of money to use in experimenting with high-priced novelties.

Price List of Plants.

Five hundred of one kind will be furnished at one thousand rates, and fifty at one hundred rates. If to be sent by mail at one hundred rates, send 20c for fifty, or 35c for one hundred.

Name.	STRAWBERRIES.	Flower.	Doz. Free by Mail.	100 Express not paid.	1,000 Express not paid.
AROMA.....	perfect		\$ 50	\$1 00	\$.....
BARTON.....	imperfect		50	75	4 00
BEDERWOOD.....	perfect		50	50	4 00
BISEL.....	imperfect		50	75	4 00
BUBACH.....	imperfect		50	50	4 00
BRANDYWINE.....	perfect		50	75	.....
BISMARCK.....	perfect		50	1 00	.....
CAPT. JACK.....	perfect		50	50	3 00
CHAS. DOWNING.....	perfect		50	50	3 00
CRESCENT.....	perfect		50	50	3 00
CYCLONE.....	perfect		50	1 00	.....
CLYDE.....	perfect		50	1 00	.....
EDGAR QUEEN.....	imperfect		50	75	.....
ENORMOUS.....	imperfect		50	1 00	.....
EDITH.....	imperfect		50	2 00	.....
FOUNTAIN.....	perfect		75	1 00	.....
GANDY.....	perfect		50	50	4 00
GLENDALE.....	perfect		50	50	4 00
GLEN MARY.....	perfect		50	1 00	.....
GIANT.....	perfect		50	1 00	.....
GERTRUDE.....	perfect		1 00	.....	.....
HAVERLAND.....	imperfect		50	75	5 00
IOWA.....	imperfect		50	1 00	.....
ISABEL.....	perfect		50	.....	.....
JESSIE.....	perfect		50	75	5 00
LOVETT.....	perfect		50	1 00	.....
MARGARET.....	perfect		50	2 00	.....
MINER.....	perfect		50	50	4 00
MUSKINGUM.....	perfect		50	75	5 00
MICHEL.....	perfect		50	75	4 00
MARY.....	perfect		75	3 00	.....
MARSHALL.....	perfect		50	1 00	.....
MEALE.....	perfect		50	3 00	.....

STRAWBERRIES—Continued.		Doz. Free by Mail.	100 Express not paid	1,000 Express not paid.
Name.	Flower.			
NICK OHMER	perfect	50	5 00	...
PARKER EARL	perfect	50	75	5 00
PARIS KING	perfect	50	75	5 00
RIDGEWAY	perfect	50	2 00	...
ROBINSON	perfect	50	50	3 50
RUBY	perfect	\$1 00	3 00	...
SPLENDID	perfect	50	75	4 00
SAUNDERS	perfect	50	1 00	...
TENNESSEE	perfect	50	1 00	...
VORIES	perfect	75	2 00	...
WARFIELD	perfect	50	50	3 00
WM. BELT	perfect	75	1 00	...
WINDSOR CHIEF	imperfect	50	50	4 00
WOLVERTON	perfect	50	1 00	...
RASPBERRIES.				
PALMER, black		40	1 50	...
GREGG		40	1 50	9 00
KANSAS, black		40	1 50	9 00
MILLER, red		1 00	2 00	...
MUNGER, black, new		1 00	2 00	...
THWACK, red		40	1 25	9 00
TURNER, red		40	1 20	8 00
PROGRESS, black		40	1 50	8 00
QUEEN, black		40	1 50	8 00
EGYPTIAN, new, black		50	1 50	10 00
BLACKBERRIES.				
EARLY HARVEST		40	1 00	8 00
SNYDER		40	1 00	8 00
TAYLOR		40	1 00	10 00
CURRENTS.				
FAY		75	3 50	...
CHERRY		75	3 00	...
RED DUTCH		75	3 00	...
GRAPES.				
CONCORD	each	50	3 50	...
NIAGARA	"	100	75	4 00
WORDEN	"	100	75	4 00
WYOMING, red	"	100	1 00	...
MOORE'S EARLY	"	100	75	...
CAMPBELL'S EARLY	"	75c	...	...

Strawberries in 1898.

OWING to a destructive hail storm on the evening of the 14th of May, our story about the behavior of varieties of strawberries in 1898 is brief. In the short space of fifteen or twenty minutes our entire crop of small fruits was wiped out of existence. Hail stones larger than eggs covered our berry patches about two inches deep, hence there were not berries enough left on our new varieties, under test, to determine anything certain about their size or productiveness. But from outside reports, Ridgeway and Clyde seem to be in the lead from Maine to Oregon. The Splendid also, introduced about 1894, is growing in great favor wherever it is being tried. Bismarck is another favorite with many growers in the East and West. Paris King is likewise growing in favor, owing to its large size and firmness. Bisel is one of our most hardy varieties, and in due time will be better known on account of its merits. Nick Ohmer is a failure in plant growth. The Aroma is late and a leader in size and attractiveness. The same may be said of the Marshall and Saunders. The Bederwood is our favorite for earliness.

WINTER PROTECTION.

THE cultivated strawberry field that has kept clean all season needs a light covering of old hay or wheat straw, scattered thinly over and between the rows. Old berry patches that have not been kept very clean will not need so much covering as a new field. Forest leaves make a good covering were it not for the high winds which frequently blow them away. Even straw and hay are badly scattered about the field when not held down by snow. Whenever the straw is blown off it should be replaced as soon as possible. For small patches, a few loads of strawy manure makes a good mulch when thrown between the rows.

FIRESIDE REFLECTIONS.

I have been several days writing this catalogue; in fact, did not expect to write so much about the berry business; but from the fullness of the heart the mouth speaketh, and it is the desire of the writer that our catalogue will be helpful to those just entering the field of berry growing, and that none will be misled in the statements herein made about the different varieties of berries. Should any receive two catalogues, they will please hand one to a neighbor who may want plants. Before ordering plants glance at the page about terms advertising department, etc.

...RASPBERRIES...

THE best soil for raspberries is a deep, sandy loam; but they will grow and yield paying crops on any soil that will grow corn or potatoes. The culture of a raspberry plantation is as simple as growing a field of corn. Prepare the ground as for an Irish or sweet potato crop, and plant in rows four by six feet. Planted thus, they may be cross cultivated. Mark off the ground as if intended for corn and set plants about three inches deep, pressing the soil firmly around the roots. Red raspberries should be set an inch or more deeper than the black, but the same distance. The ground on which they are planted need not be entirely lost the first season of their growth, as a row of corn, or potatoes, which is better, may be planted between the rows of raspberries.



Progress.

SMITH'S SELECT LIST OF

22 Commercial 37 Raspberries

EGYPTIAN.—Black, one of the best early sorts now in cultivation.

PROGRESS.—Ranks along with the Egyptian for a profitable and good commercial raspberry. Owing to its early ripening, there is an advantage of getting better prices than there is when the medium sorts come in.

The canes of the Progress, Egyptian and Queen of the West are free from the raspberry disease, known as anthracnose.

BISHOP.—It is a raspberry of Kansas origin. The party of whom we obtained it wrote me that we would grow no other when we became acquainted with it. But we do not find any points of value above the Queen or Egyptian.

GREGG.—Well known, canes not always hardy, fruit large.

KANSAS.—This famous berry is a Douglas county production. This is the largest variety ripening in mid season. Very large and productive.

OLDER.—This sort is late, but no comparison in productiveness to the four kinds we name for commercial growing.

PALMER.—This sort is not more than half as productive as Egyptian or Progress, and it is no earlier than Progress.

QUEEN OF THE WEST.—This sort is nearly as large as Kansas or Gregg, ripening its crop slowly, like Egyptain and Progress. Canes are large and hardy.

The above four varieties are my selection for commercial growing.

2 RED RASPBERRIES. 2

BRANDYWINE.—This sort is so much like Thwack that it is hard to tell them apart. But on our soil either Thwack or Turner is more profitable.

MILLER.—This is a new variety of Delaware origin. Its fruit is a bright scarlet, bushes hardy, strong and productive. Prof. Van Deman says it is the best red sort they have in Delaware.

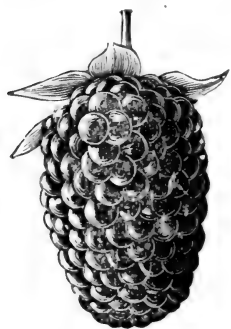
TURNER.—This is an old, well known variety that was originated by Prof. J. B. Turner, of Jacksonville, Illinois. It was introduced about thirty years ago. Its fruit is the best flavored of any red sort we know. Its only hindrance is the tenderness of the berries. When it is shipped far away to market it requires pint boxes. The cane is strong and hardy and should be grown in hills of from six to eight canes to the hill and planted four by six feet apart. The old canes should be cut out every year as soon as fruiting is over.

THWACK.—This is the firmest red sort, and should be planted the same distance apart as the Turner. The fruit is firm, and it will stand transportation to Denver (600 miles.)

MUNGER.—Originator's description: "The fruit of Munger is black, and resembles Gregg. But it is a better flavored berry than Gregg, tougher in texture, and therefore a better shipper. In size it excels Gregg 25 per cent. Its season of ripening is five days later than Gregg. The past season when most other kinds were dry and seedy, Munger ripened up sweet and juicy, and sold for 50 cents per crate over other sorts. Canes have never yet been effected by cold weather."

BLACKBERRIES.

THE same preparation of soil for strawberries and raspberries is equally as good for blackberries. Plant them in rows 4 x 7 feet and cultivate with same tools as those used for raspberries. The second season's growth of canes should be pinched off with thumb and finger when they are about two feet high.



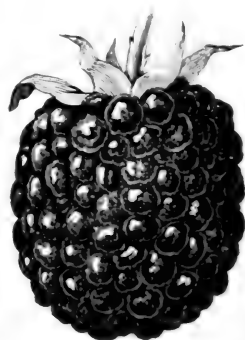
Early Harvest.

EARLY HARVEST.—This is the earlist of all blackberries. It begins to ripen two weeks in advance of any other sort; in fact, it comes in with black raspberries. It is the firmest blackberry grown.

SNYDER.—This is a well known blackberry, and when canes are properly trimmed, berries are of good size, but when the lateral branches are not cut back to the proper limit its fruit is small and seedy. Its

season rarely lasts over two weeks, while the season of the Taylor is about four weeks.

TAYLOR.—Bush perfectly hardy. Berries are nearly as large as Kittatinny when lateral branches are well cut away in the spring. It is my favorite blackberry for distant market purposes.



Snyder.

..PEARS..

Pears are distinguished for their great delicacy, their juicy nature and their rich and delicious flavor. Though exceeding the apple in these particulars, they fall behind the latter in importance, in consequence of the less healthy habits of the tree. Yet every farmer should have a small pear orchard, or at least a dozen or more trees growing about the yard or in the garden. A nice thrifty pear tree is an ornament on the lawn, in the garden, along the roadway or anywhere else on the farm. Should a time come when one has to sell the farm every good bearing pear tree will add ten times more value to the farm than it cost to grow it. About 900 varieties of this fruit have been catalogued the past fifty or sixty years. About fifty varieties are all that are now recommended as valuable, as the knowledge of varieties, habits of growth, and value for commercial purposes have advanced so far that the standard and ideals of the growers of this choice fruit are higher. Hence the dropping of 800 or more from the long list formerly advertised in the catalogues. The small Seckel is now the standard for excellence of taste. Were it about three times as large it would be hard to conceive of a better sort for all purposes. The Bartlett stands second to the Seckel for exquisite flavors, but it is more subject to blight than any variety grown in Kansas. I would not plant 500 trees of it for commercial purposes, if they were given to me.

The Duchess, Sheldon and Buerre d' Anjon are the largest, and, excepting the Seckel, are the best commercial pears. Tyson is one of the early pears, but the tree does not bear fruit until it is from twelve to fifteen years old. The Bartlett when not blighted begins to bear the fifth or sixth year. The Seckel dwarf will show a few pears the third year from planting, as a standard 8 years. The Duchess, which is grown on the Quince stock, begins to bear the third or fourth year. The Buerre'd Anjon begins bearing on standard the sixth or seventh year, and when dwarf, the third year. The hardiest trees and least subject to blight, are Seckel and Duchess, second Buerre'd Anjon, Sheldon and Buerre Clairgeau. The growers of the Keifer pear are singing its praises all over the land, but to my taste it is far beneath any other pear grown in the country. In fact it does not deserve to be called a pear when placed in comparison with the Seckel, Duchess, Anjon, etc. Blight is the main hindrance to pear growing in this country, but where trees are planted around the yard or in lots where the soil is not stirred too often, they may and more often do, escape the blight. Pear trees frequently live to be over 100 years old, but

those old trees are generally common seedling planted by our grand fathers before there was any budding of grafting done. There are many good varieties that I have not named, but I have selected those that have succeeded best in Kansas and those that have paid me the most money.

I will close this paper by advising every farmer to plant some pears. Whatever trials you may have had in the past by blighted trees, the pleasure you may have in those that stand the test, will pay you, in pleasure, a hundred fold, to see the opening of the leaves and buds, and then the perfumed blossoms, and lastly, the sun-kissed, heaven born, delicious fruit.

Price List of Pears.

BARTLETT.—Well known to be one of the best, bearing early and abundantly, but most liable to blight. Ripe last of August. Each 25c, Dozen \$2.40.

DUCHESS. — Largest pear grown. Trees bear young and abundantly. Fruit enormous in size. Ripe in this latitude the last of September. Each 25c, dozen \$2.30, 100 \$15.00.

BEURE D' ANJOU—Buttery, juicy, vinous flavor. Tree is hardy, rarely blights. Fruit larger than the Duchess. Anjon and Duchess are leaders for commercial trade. Each 25c, dozen \$2.40, 100 \$15.00.

SECKEL.—Small, yellowish russett, with a red cheek. Flesh whiteish, very juicy and melting. This is the ideal for excellent flavor. Ripe about September 10th. Each 25c, dozen \$2.40, 100 \$15.00.

BEURE CLAIRGEAU.—Large, skin yellow, buttery, sweet. One of the best market pears, always brings a good price in Kansas City and Topeka. Ripe first of October. Put in cold storage, it will keep until December. Each 25c, dozen \$2.40.

KIEFFER.—The latest pear. Fine for canning. Ready to pick October first, ripe in November. Each 25c, dozen \$2.40, 100 \$15.00.

While there are a great many good pears of other varieties, the above is our selection for home use and the best for western markets.

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KANSAS CITY, MO.

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UNIVERSITY OF KANSAS.

DEPARTMENT OF ENTOMOLOGY.

FEBRUARY 21st, 1899.

This is to certify that I have this day examined the premises and nursery stock of the Highland Fruit Farm and Nursery, B. F. Smith proprietor, and have found thereon no evidence of the existence of the San Jose Scale or of its former presence, and that the said stock is apparently in a healthy and vigorous condition.

S. J. HUNTER,

Associate Professor of Entomology.

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We frequently have inquiries for books on Fruit Culture. We can supply our patrons with any of the following volumes.

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